Ham-Policy Digest   Tue, 11 May 93   Volume 93 : Issue 138

Today's Topics:
                              More on no-code
                    Packet Rules Question (2 msgs)

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 11 May 1993 20:29:16 GMT
From: unogate!news.service.uci.edu!usc!zaphod.mps.ohio-state.edu!math.ohio-
state.edu!magnus.acs.ohio-state.edu!usenet.ins.cwru.edu!agate!news.ucdavis.edu!
othello.ucdavis.edu!ez006683@@mvb.saic.com
Subject: More on no-code
To: ham-policy@ucsd.edu

paulf@umunhum.stanford.edu (Paul Flaherty) writes:
: In article <1993May11.153343.12666@ke4zv.uucp> gary@ke4zv.UUCP (Gary Coffman)
writes:
: >Actually the content of DX transmissions is the null set, but that's another
: >argument.
:
: Come on Gary, sniping at other petty ham radio fiefdoms is hardly a productive
: tactic...
:
: > The purpose of communications is the transference of information,
: >anything else is just jamming. So I contend that measuring the content per
: >unit time and unit bandwidth is a valid measure of efficiency.
:
: True, but the *quantity* of information is not necessarily independent of

: the time to send it; in fact, in the amateur service, it's inversely
: proportional. For example, if I have an hour between chores on Saturday,
: I'll operate the full time. If I'm on CW, the nature of what I talk about
: changes; eg, I'd *never* get into a complex discussion. SSB is a different
: story; it's fun to chew the rag. In any event, all of this is because
: amateur communication is, by regulation, unimportant, and therefore flexible.

Now it all makes sense!!! CW operators don't discuss complex things. Why
didn't you just say so in the first place. If I want to discuss something
complex I need to use SSB but if I want to make simple statements I use
CW. So on CW we don't discuss pros and cons or argue about usefulness or
how interesting things are we just make statements and don't get into the
deeper more complex questions of wether they are right or not. Thaks for
clearing that up Paul. :-)

: Above all, getting back to the original topic, how are you going to guarantee
: that the vast majority of new users won't just bypass that ("hey, that
: computer stuff is too complex and costly"), and just overcrowd the bands with
: SSB?

  Above all, getting back to the original topic how are you going to guarantee
  that the vast majority of new users won't just bypass that ("hey, that
  CW stuff is just too slow for complex discussion), and just overcrowd
  the bands with SSB? :-)

Dan
--
---
* Daniel D. Todd   Packet: KC6UUD@WA6RDH.#nocal.ca.usa   *
*   Internet: DDTODD@ucdavis.edu   *
*   Snail Mail: 1750 Hanover #102   *
*   Davis CA 95616   *
---
*   I do not speak for the University of California....   *
*   and it sure as hell doesn't speak for me!!   *

Date: 11 May 1993 09:33:50 -0400
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!usc!sdd.hp.com!
nigel.msen.com!ilium!gdls.com!gdls.com!not-for-mail@network.UCSD.EDU
Subject: Packet Rules Question
To: ham-policy@ucsd.edu

Current FCC rules allow for the "participation" in amateur radio by non-licensed
people. With HF, I have taken this to mean that if a licensed amateur was

controlling the station, provided the communication was between US stations,
a non-ham could speak into the mic.

I assume that this extends to packet via BBSes and direct. I.e. as long as a
licensed ham is in control of the station, a non-licensed individual may
enter in a packet message to send.

I do a lot of demos at schools and with the scouts. In the past I have mainly
done HF and VHF, only recently starting with packet.

Thanks for any comments

Bill
--
 Bill Turini, KA4GAV   Chief, Technical Systems
 Computer Sciences Corporation   turini@gdls.com
 6000 E. 17 Mile Road   (313) 825-8810
 Sterling Heights, MI 48313

Date: Tue, 11 May 1993 19:52:50 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!news.ucdavis.edu!othello.ucdavis.edu!
ez006683@network.UCSD.EDU
Subject: Packet Rules Question
To: ham-policy@ucsd.edu

turini@gdls.com (Bill Turini) writes:
: Current FCC rules allow for the "participation" in amateur radio by non-licensed
: people. With HF, I have taken this to mean that if a licensed amateur was
: controlling the station, provided the communication was between US stations,
: a non-ham could speak into the mic.
:
: I assume that this extends to packet via BBSes and direct. I.e. as long as a
: licensed ham is in control of the station, a non-licensed individual may
: enter in a packet message to send.
:
: I do a lot of demos at schools and with the scouts. In the past I have mainly
: done HF and VHF, only recently starting with packet.
:
: Thanks for any comments

     I think you are alright with this. I believe this is treated like
any other third party traffic. Which means that it is approved for
domestic contacts and Dx contacts with stations in countries that have 3rd
party agreements with the US. I think there is a list of 3rd party
nations available via the ARRL mail server, but I'm not sure. Not only
can an unlicensed individual send a packet while you are at the keyboard

they can also mail the packet to you and you can pass it on from the
internet to ampr. There are a couple people who provide just such a
service on the 'net. I don't have the information here now but e-mail me
if you want more info. Keep up the good work. We can use all the GOOD
hams we can get.

Dan

--
--
* Daniel D. Todd   Packet: KC6UUD@WA6RDH.#nocal.ca.usa   *
*   Internet: DDTODD@ucdavis.edu   *
*   Snail Mail: 1750 Hanover #102   *
*   Davis CA 95616   *
--
*   I do not speak for the University of California....   *
*   and it sure as hell doesn't speak for me!!   *
--

Date: Tue, 11 May 1993 15:33:43 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!gatech!kd4nc!
ke4zv!gary@network.UCSD.EDU
To: ham-policy@ucsd.edu

References <1993May7.174540.14265@leland.Stanford.EDU>,
<1993May9.130848.4228@ke4zv.uucp>, <1993May10.183640.9464@leland.Stanford.EDU>
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: More on no-code

In article <1993May10.183640.9464@leland.Stanford.EDU> paulf@umunhum.stanford.edu
(Paul Flaherty) writes:
>In article <1993May9.130848.4228@ke4zv.uucp> gary@ke4zv.UUCP (Gary Coffman)
writes:
>>That mandated spectrum preserve, rather than the spectral efficiency of CW,
>>is what's retarded the decline of CW on HF.
>
>In so arguing, you've just conceded the justification for maintaining both the
>requirement and the preserve.

Not at all. What I've shown is that a government mandated mode preserve
has kept alive a communications method that otherwise would not have as
wide a following. That says nothing as to the wisdom of the government
action. To contend otherwise is merely self referential.

>> At VHF and above this spectrum segregation

>>has never been an issue and CW is a speciality mode that sees limited
>>use.
>
>No, that's because the available spectrum is many times that at HF, so large
>in fact that overcrowding has never been a problem, and probably never will
>be.

I decided to do a little empirical research in response to this. I selected
two 350 kHz frequency segments, 14.000-14.350 and 146.61-146.97, OK I
made the VHF sample 10 kHz bigger. I then did a simple listening test
for 10 minutes each band and counted the stations heard. On 2 meters, all
stations were FM and 57 were copied. On 20 meters, CW, AMTOR, RTTY, packet,
SSB, and one lone AM signal were heard for a total of 80 stations. So it's
certainly true that HF population density is higher than VHF in this sample.
If I'd included the 2 meter packet frequencies, however, the totals would
have reversed. Now let's look at how the 20 meter band broke down. In the
Extra CW segment there were 3 signals heard in QSO. In the 14060-80 AMTOR
segment 4 signals were heard. Also in the 14.090-100 RTTY segment 4 signals
were heard. In the 14.100-110 packet segment 19 signals were decyphered,
though more were heard but not separated. In the voice segment, 37 signals
were identified, but I didn't stay on one frequency long enough to get all
the stations involved. There was a net and several rag chew groups, so this
count is under represented. And the lone AMer was certainly talking to
someone, but I couldn't copy. Outside the Extra CW segment there were a
total of 12 CW signals heard across the entire band, including one operating
very near the 14.350 band edge. Again I didn't catch both sides of many of
these contacts. In general the CW portions were vacant wastelands. Now
you may think this is good, but I think it's a poor allocation of spectrum.

>>But it doesn't demonstrate in practice it's theoretical bandwidth
>>savings. Most CW contacts still space at least a kilohertz apart, and
>>complaints from CW operators are long and loud when any other mode attempts
>>to share spectrum with them.
>
>The first argument is not unique to CW, as most SSB operators space themselves
>out even further, until the band fills up, at which point, like the CW ops,
>they crowd together.
>
>The second argument has been previously dealth with; wideband and narrowband
>modes should not share spectrum, as the wides interfere with the narrows but
>not vice versa.

This is an amusing claim, though in practice it's likely true. The CW
proponents are always the ones claiming they can get through when other
modes cannot, yet here you are saying that voice transmissions interfere
with CW's ability to function while CW doesn't impair voice. If we look
at the energy densities in the respective bandwidths, we find that the

portion of the voice signal in the CW bandwidth is roughly 1/10th the
energy of the voice signal while 100% of the CW signal energy falls in
the voice bandwidth. If the two stations are running the same power,
the CW user should be seeing 10db less interference than the voice
user, but the CW user is suffering severe interference while the
interference to the voice user is negligible according to you. It's
probably because the human brain is more adept at pulling the human
voice out of interference than it is in isolating a mechanical sound.

>> Also spectrum is shared by law in the time as well as the frequency domain.
>> The higher thruput of other modes can use the spectrum as efficiently, if
>> not more so, than manual CW by occupying spectrum for a lesser time for the
>> same message content.
>
>While this is true in most services, it isn't true in the Amateur Service.
>The key here is "message content", and your argument assumes that message
>length is time independent. While time independence is valid for certain
>activities within the amateur service (message passing), it is generally
>invalid, because spectrum occupancy is a function of the operator's free
>time than of information content (true of ragchewing, contesting, dxing).

Actually the content of DX transmissions is the null set, but that's another
argument. The purpose of communications is the transference of information,
anything else is just jamming. So I contend that measuring the content per
unit time and unit bandwidth is a valid measure of efficiency. The rules
say no station owns a frequency and that frequency sharing is good amateur
practice. It certainly seems more common among voice users for several
stations to share a frequency and take turns talking than it does among
CW users. In the same time, many more information units are exchanged
among the voice users.

>> With most CW
>>operator's actual speeds hovering around 15 WPM, and with RTTY at 60 WPM,
>>AMTOR at about 30 WPM, and HF packet on a good day going 12 WPM, and speech
>>at 120 WPM, CW only beats one of the other modes in raw speed for transfering
>>information. When you look in terms of WPM/Hz/sec, CW falls toward the
>>back of the pack except for a very few exceptional operators under exceptional
>>conditions.
>
>Aside from being invalidated by the previous assumption, you're not comparing
>all three techniques on an information - equal basis. AMTOR, RTTY and SSB
>all have much higher bit error rates than CW. Unless you apply a fairly low
>rate code to the former two, the comparison is meaningless.

While bit errors are a damning condemnation of HF packet, they are not of
RTTY any more than they are of CW. The operator's skill in interpolating
content under conditions of error applies to both. CW operators miss a letter
here and there due to noise, fading, or interference just like with RTTY,

but context is usually sufficient to get meaning from the signal. Voice is
so highly redundant and context sensitive that missing a bit here and there
is usually of less consequence than with highly abbreviated CW. It's easy
to get the message content of a voice transmission through severe impulse
noise that would kill other methods.

>>I won't be at all surprised to see SS or MSK, coupled with FEC, become the
>>dominant method of working moonbounce in the next few years.
>
>SS might get you around the libration fading problem, but you still need to
>get above the MSK threshold to get to a point where any high rate FEC will
>help you. Perhaps SS -> PSK -> Low Rate Convolutional Code -> FEC.
>But of course, one can do this without any access to HF, and in fact, given
>access to such a system, why is access to HF needed?

Given that the typical HF path loss is about 140db less than the EME
path, these advanced techniques should be even more effective on HF.
While such transmissions will be possible on the EME path, they could
be positively routine on the HF path. That would allow less power to
be run, and more stations to share the spectrum than would be possible
with narrowband modes.

Gary
--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

Date: 11 May 93 16:57:24 GMT
From: ogicse!emory!swrinde!zaphod.mps.ohio-state.edu!uwm.edu!linac!
newsaintmail@network.UCSD.EDU
To: ham-policy@ucsd.edu

References <1skf6b$d3o@network.ucsd.edu>,
<1993May10.053349.14436@nntpd2.cxo.dec.com>,
<930510.163317.0E9.rusnews.w165w@garlic.sbs.com>
Subject : Re: no-code defense

In article <930510.163317.0E9.rusnews.w165w@garlic.sbs.com>, system@garlic.sbs.com
(Tony Pelliccio) writes:
> little@nuts2u.enet.dec.com (nuts2u::little) writes:
>
>> Also, to stand by and accept the condescending drivel from the sbs gang is
>> to agree with it. I certainly hope there are many who find the comments
>> emanating from the sbs nodes obnoxious and uncharacteristic of the amateur

>> radio community. Certainly in Chicago I have yet to hear one remark even
>> closely resembling the invectives spewing forth from *.sbs.com. Like I
>> said, glad I'm in Chicago and not Providence.
>
> And we're glad you're there and not in Providence too!
>
OOooooh, you sbs guys really have a way with words. Add my name to the list of
people who are glad that they're far away from the sbs snobs in Providence.

===
[Mark E. Levy, N9RXF |]
[BitNet: LEVY@FNAL | Unix is to computing   ]
[Internet: LEVY@FNAL.GOV | as an Etch-a-Sketch is to art.   ]
[HEPnet/SPAN: FNALD::LEVY (VMS!) |]
===

Date: Tue, 11 May 93 15:17:13 GMT
From: walter!porthos!dancer!whs70@uunet.uu.net
To: ham-policy@ucsd.edu

References <930425.131406.1I8.rusnews.w165w@garlic.sbs.com>,
<C65wID.Lvn@ucdavis.edu>, <2284@indep1.UUCP>
Subject : Emergency preparedness, was...Re: no-code defense

In article <2284@indep1.UUCP> clifto@indep1.UUCP (Cliff Sharp) writes:
>   Let's try a scenario. The "big one" his Los Angeles. No power, no
>repeaters, most equipment is junk, no transportation, no phones, no
>communications. While you're still trying to figure out how to modulate
>a carrier, I'll be on the air, with a LEGAL transmitter in a LEGAL ham
>band, communicating with the outside world, because I can design, build
>and power a CW transmitter/receiver... and I can use CW.

Let me see if I can fully understand this. The "big one hits" and your
the only one with communications capability because you're going to build
your own CW transceiver and then use it to talk to the world. Indeed,
if all the equipment is rendered junk, by what stroke of luck do you
presume your home will be spared, AND if it isn't spared, how do
you propose to build your CW rig (e.g. assemble AND power the
your home made CW rig?

Let me suggest, that while you're building your rig, that the many other
"appliance" operators out there will already be providing emergency
comunications with equipment powered by battery, mobile installations,
etc. in many cases using repeaters installed with UPS (uninterupted power
supply) capability, etc.

Unfortunately, your suggestion about "the big one" indicates (at least to me)
that you have little knowledge of the extensive emergency communications
capabilities of the many governmental agencies (police, fire, etc.),
the telephone company (something I'm reasonably knowledgeable of) and the
ham community at large (especially those involved with RACES).

Interestingly, and I pose this as a comment and general question to
others in this newsgroup, I'm unaware of any CW practice drills being
done within my local (Morris County, NJ) RACES area. Are there any
RACES groups which do any type of CW operation as part of their
emergency preparedness drills and/or practice sessions?

PLEASE DIRECT ALL RESPONSES ONLY TO   rec.radio.amateur.policy

Standard Disclaimer- Any opinions, etc. are mine and NOT my employer's.

Bill Sohl (K2UNK) BELLCORE (Bell Communications Research, Inc.)
Morristown, NJ   email via UUCP   bcr!cc!whs70
201-829-2879 Weekdays   email via Internet whs70@cc.bellcore.com

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Date: 11 May 93 21:13:17 GMT
From: ogicse!emory!europa.eng.gtefsd.com!darwin.sura.net!mlb.semi.harris.com!
SU19F!jhobson@network.UCSD.EDU
To: ham-policy@ucsd.edu

References <C65wID.Lvn@ucdavis.edu>, <2284@indep1.UUCP>,
<1993May11.151713.15929@porthos.cc.bellcore.com>P
Reply-To : jhobson@SU19F.UUCP (Harv Hobson)
Subject : Re: Emergency preparedness, was...Re: no-code defense

In article <1993May11.151713.15929@porthos.cc.bellcore.com>
whs70@dancer.cc.bellcore.com (sohl,william h) writes:
>Interestingly, and I pose this as a comment and general question to
>others in this newsgroup, I'm unaware of any CW practice drills being
>done within my local (Morris County, NJ) RACES area. Are there any
                          ^^^^^^
>RACES groups which do any type of CW operation as part of their
>emergency preparedness drills and/or practice sessions?

Would you please refrain from referring to Morris. My feelings
are extremely hurt when you make fun of the encoding use for my
favorite mode.

```
:)

Harv Hobson
WB4NPL
jhobson@ess.harris.com
[actually there's no joke about CW being my favorite mode]

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Date: 11 May 93 13:29:08 GMT
From: ogicse!emory!europa.eng.gtefsd.com!darwin.sura.net!rsg1.er.usgs.gov!
resdgs1.er.usgs.gov!tbodoh@network.UCSD.EDU
To: ham-policy@ucsd.edu

References <1993May5.144400.16967@hemlock.cray.com>,
<1993May10.010936.27854@qualcomm.com>, <1slp96INNduh@topaz.bds.com>
Subject : Re: Cellular capable scanners...Buy'em Whil

In article <1slp96INNduh@topaz.bds.com>, ron@topaz.bds.com (Ron Natalie) writes:
|>    > As Tsutomu Shimomura demonstrated to the House Subcommittee on
|>    > Telecommunications and Finance the other week, the very best cellular
|>    > "scanner" is an actual cell phone with hacked firmware. He says the
|>    > hardest part is finding the right screwdriver to take off the screws.
|>
|> Oh great, now we're going to have to have a law banning the manufacture
|> of these screw drivers.
|>
|> -Ron

--
Only screwdrivers capable of restoring cellular scanning capabilities to
cellular phones or scanners.  No screwdrivers capable of this will be
approved by the FSC after June 1,1993 and cannot be manufactured after
June 1,1994.  Repair shops may still have these screwdrivers though.

Screwed again ;)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+ Tom Bodoh - Sr. systems software engineer
        +
+ USGS/EROS Data Center, Sioux Falls, SD, USA  57198     (605) 594-6830      +
+ Internet; bodoh@dgg.cr.usgs.gov (152.61.192.66)
        +
+    "Welcome back my friends to the show that never ends!" EL&P
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            +
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Date: Tue, 11 May 93 18:25:30 GMT
From: agate!headwall.Stanford.EDU!nntp.Stanford.EDU!umunhum!paulf@ames.arpa
To: ham-policy@ucsd.edu

References <1993May9.130848.4228@ke4zv.uucp>,
<1993May10.183640.9464@leland.Stanford.EDU>, <1993May11.153343.12666@ke4zv.uucp>$
Subject : Re: More on no-code

In article <1993May11.153343.12666@ke4zv.uucp> gary@ke4zv.UUCP (Gary Coffman)
writes:
>I decided to do a little empirical research in response to this. I selected
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>made the VHF sample 10 kHz bigger. I then did a simple listening test
>for 10 minutes each band and counted the stations heard. On 2 meters, all
>stations were FM and 57 were copied. On 20 meters, CW, AMTOR, RTTY, packet,
>SSB, and one lone AM signal were heard for a total of 80 stations. So it's
>certainly true that HF population density is higher than VHF in this sample.

Aside from being too small a sample to be meaningful, you should be aware
of the fact that the FCC (and the ITU as well) regularly performs extensive
spectrum surveys at HF (and beyond).   Several other outside agencies do
this as well, mostly spectrum vultures.  The comments made by the PRB folk
are based largely on those samples.  If we really want the definitive answer,
we should obtain a copy of the surveys.

>Actually the content of DX transmissions is the null set, but that's another
>argument.

Come on Gary, sniping at other petty ham radio fiefdoms is hardly a productive
tactic...

> The purpose of communications is the transference of information,
>anything else is just jamming. So I contend that measuring the content per
>unit time and unit bandwidth is a valid measure of efficiency.

True, but the *quantity* of information is not necessarily independent of
the time to send it; in fact, in the amateur service, it's inversely
proportional.  For example, if I have an hour between chores on Saturday,
I'll operate the full time.  If I'm on CW, the nature of what I talk about
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story; it's fun to chew the rag.  In any event, all of this is because
amateur communication is, by regulation, unimportant, and therefore flexible.
```

>While bit errors are a damning condemnation of HF packet, they are not of
>RTTY any more than they are of CW. The operator's skill in interpolating
>content under conditions of error applies to both. CW operators miss a letter
>here and there due to noise, fading, or interference just like with RTTY,
>but context is usually sufficient to get meaning from the signal.

Unless you're running a tree code on top of RTTY, this is not the case.
In relying on a generic SCC to do the interpolation for you, you not only
don't benefit from human recognition, but you also lose the information with
which a human could interpolate with.

>Given that the typical HF path loss is about 140db less than the EME
>path, these advanced techniques should be even more effective on HF.

Aside from the fact that the fading characteristics are different, you
have a lot less spectrum with which to spread. Also, synchronization
is much more of a problem, especially with F1/F2 height variance during a QSO,
and oh yeah, it's not cheap (if it was, there wouldn't be a market for GPS or
GOES clocks).

Above all, getting back to the original topic, how are you going to guarantee
that the vast majority of new users won't just bypass that ("hey, that
computer stuff is too complex and costly"), and just overcrowd the bands with
SSB?

--
-=Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

Date: 11 May 93 19:36:59 GMT
From: furuta@MIMSY.CS.UMD.EDU
To: ham-policy@ucsd.edu

References <1993May09.131406.2334@anomaly.sbs.com>,
<1993May11.043958.27810@ssc.com>, <1993May11.101907.29242@anomaly.sbs.com>
Subject : Re: what is the issue here? (WAS: no-code defense)

In article <1993May11.101907.29242@anomaly.sbs.com| kd1hz@anomaly.sbs.com (Rev.
Michael P. Deignan) writes:

```
|Ah, looks like the personal attacks/slurs are starting up. One clear sign
|that the person posting is losing the debate...
|
[...body deleted...]
|
|[more lame attempts at personal slurs deleted... But then again, given
|that he falls into the CB-transplant license category, does this really
|surprise anyone?]
|
|MD
|--
|--  Michael P. Deignan, KD1HZ                   /   Since I *OWN* SBS.COM,
|--  Domain: kd1hz@anomaly.sbs.risc.net       /    these opinions generally
|--    UUCP: ...!uunet!anomaly!kd1hz          /      reflect those of my
|-- Telebit: +1 401 455 0347                  /      company...

Is this too easy of a setup for a quick retort or what?

                  --Rick


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End of Ham-Policy Digest V93 #138
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